DOCUMENT RESUME

ED 470 150 IR 021 590

AUTHOR	Dakwa, Kwame Dwamena; Burger, Kathleen
TITLE	Teaching in the 21st Century: A Web Experience.
PUB DATE	2001-11-00
NOTE	6p.; In: Annual Proceedings of Selected Research and Development [and] Practice Papers Presented at the National Convention of the Association for Educational Communications and Technology (24th, Atlanta, GA, November 8-12, 2001). Volumes 1-2; see IR 021 504.
PUB TYPE	Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
EDRS PRICE	EDRS Price MF01/PC01 Plus Postage.
DESCRIPTORS	Course Content; Course Evaluation; Distance Education; *Educational Development; *Educational Psychology; Educational Research; Higher Education; *Instructional Design; *Instructional Development; *Web Based Instruction; World Wide Web
IDENTIFIERS	Indiana University

ABSTRACT

In 1996, Bonk and Cummings set out to design, implement and refine Web-based educational psychology courses and laboratory experiences offered to pre-service teachers at Indiana University. Utilizing the American Psychological Association's 14 Learner Centered Principles (1993, 1997), Alexander and Murphy (1994), Bonk and Reynolds (1997), Bonk and Cummings implemented the university's first online course in educational psychology. Course evaluation and subsequent refinement occurred shortly thereafter (Bonk & Dennon, 1999), and the course framework was considered strong enough for associate instructors to implement. This paper focuses on the experiences of two associate instructors who taught this Web-based course in educational psychology, while simultaneously taking a course in Teaching and Instruction, and consulting with the course designers. While great latitude was given in teaching the course, it was accompanied by the need to justify any revisions. For the most part, each instructor maintained the basic framework during his or her first semester that the course was taught. Both associate instructors were graduate students in the Department of Counseling and Educational Psychology with prior teaching experience, although neither had experience teaching an online course. (Contains 13 references.) (Author/AEF)

Reproductions supplied by EDRS are the best that can be made
from the original document.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

D. Harris

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Teaching in the 21st century: A web experience

Kwame Dwamena Dakwa
Kathleen Burger
Indiana University

ED 470 150

In 1996, Bonk and Cummings set out to design, implement, and refine web-based educational psychology courses and laboratory experiences offered to pre-service teachers at Indiana University. Utilizing the American Psychological Association's 14 Learner Centered Principles (1993, 1997), Alexander and Murphy (1994), Bonk and Reynolds (1997) Bonk and Cummings implemented the universities first on-line course in educational psychology. Course evaluation and subsequent refinement occurred shortly thereafter Bonk & Dennon (1999) and the course framework was considered strong enough for associate instructors to implement.

This paper focuses on the experiences of two associate instructors who taught this web-based course in educational psychology, while simultaneously taking a course in Teaching and Instruction, and consulting with the course designers. While great latitude was given in teaching the course, it was accompanied with the need to justify any revisions. For the most part, each instructor maintained the basic framework during his or her first semester the course was taught. Both associate instructors were graduate students in the Department of Counseling and Educational Psychology with prior teaching experience, although neither had experience teaching an on-line course.

Technical skills varied

The first step, according to Burger, was to organize an approach to teaching educational psychology on-line. This involved consideration of the material and the method. After reviewing several current texts, Burger chose Snowman and Biehler's Psychology Applied to Teaching - 9th ed. (2000). She chose this text because Dr. Bonk, one of the course designers, wrote portions of the text pertaining to the use of technology, and because the text and course materials, framework, case studies, and other activities were available and integrated, more time could be used to review course material; very helpful when teaching a new course. To ma intain the structured feature of the course, Dakwa also selected the Snowman and Biehler text. The integration of technology into the textbook by Bonk (2000) made teaching with the text on-line very appropriate. Especially for first time on-line instructors.

Instructional Theory

As instructors, we realized that specific instructional approaches adopted could greatly influence student's interest in the classroom and consequently affect student learning of content. - Utilizing a research-based instructional approach, we proceeded to create our on-line classroom.

Instruction, according to Driscoll (1994), is to deliberately arrange learning conditions in such a way that specific goals can be attained. To assist in systematizing these learning conditions some instructional theories have been set out to provide a framework in which these learning conditions can be created. Reigeluth (1983) defines instructional theory as the identification of methods that best provide conditions under which learning goals are most likely to be attained. For the instruction to be successful, it must be compatible with the learning objectives (Reigeluth, 1983; Driscoll, 1994). In our on-line class, our syllabus was very detailed, stressing learning objectives, presenting assignments and all due dates (which were flexible), readings, and description of all course requirements. During the first physical meeting (it is highly recommended that instructors and students meet at the beginning of class if possible) these objectives were discussed in detail, greatly enhancing instructor/student interaction during the course.

Instructional theories encompass learning theories, in that it is the instructional methods adopted by the instructor that will determine the outcome of the learning theory adopted. Figure 1 shows that the core of the instructional process is outcome. Choosing the appropriate instructional theories leads to more effective use of learning theories, and provides a clear path for obtaining instructional objectives. It should also be noted that several other factors contribute to the learning outcome e.g. student motivation, whether class is an elective or requirement.

IR021590

BEST COPY AVAILABLE

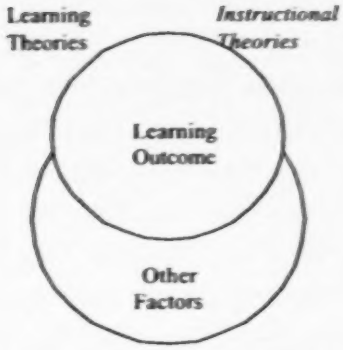

Fig. 1. Relationship between Instructional and Learning Theories and other factors influencing outcome

Particularly for emerging professionals, it is imperative to consider the difference between desired learning outcomes and actual learning outcomes (Reigeluth, 1983). Actual outcomes, Reigeluth writes, are "the real-life results of using specific methods under specific conditions, whereas desired outcomes are goals, which often influence what methods should be selected" (p. 15). This is a crucial point. It is at the beginning of designing the classroom framework that the instructor needs to invest a large amount of time selecting specific methods to be used for the desired learning outcomes.

The Web has created vast opportunities for educators and students, researchers, and practitioners. According to the US Dept of Education 2000 report, 84% of two-and-four year colleges expect to offer distance-learning courses on the web in 2002. Clearly, the earlier work of web educators and student response will be extremely valuable in the coming years. While the basic framework for the on-line course in educational psychology remained stable, the design for the chosen software (SiteScape Forum), as well as the strategies chosen to present the material and specific content for the course, continues to evolve. The growth of teaching on the web continues to expand and it is imperative to be aware of the various pedagogical strategies being developed for on-line teaching; strategies that have been used to harness the current technological advancement and provide efficient, effective, and creative opportunities in education and training.

Duffy and Jonassen (1992) noted that objective perspectives have for some time shaped instructional design practice. They suggested that constructivism provides an alternative basis for conceptualizing instructional experiences. In designing an effective and efficient distributed learning interface, the following seven criteria should be considered: extensive interaction; flexible structure; multiple resources; transparent interface; learner control; attention; and satisfaction. In addition, one might note that the on-line format for this educational psychology course also enhances student information processing ability, strengthens approach to novel tasks, and extends the classroom beyond the four walls by incorporating rich resources from the world wide web and other non-traditional methods.

When teaching in a medium that does not support any physical interaction with students, instructors should structure content so that ideas are related and attention is given to the sequencing of information flow (Reigeluth & Stein, 1983) with special consideration for: selections, sequencing, synthesizing, and summarizing (the four S's). Structure and clarity is always important in an on-line environment, but particularly so when students are experiencing an on-line course for the first time. Reigeluth & Stein's (1983) Elaboration Theory of Instruction suggests that instructors first present an epitome, or an instructional block of information, to the students, along with a motivational strategy. This would then be followed by a level-1 lesson, elaborating on various aspects of the epitome. This elaboration serves to help the student organize the content of the epitome. Finally, detailed content, reaching the objectives of the lesson is presented. By systematically presenting the content and summarizing as the lesson is presented, students are able to assimilate and accommodate the content as the lesson proceeds.

The ARCS model of motivational design integrates a wide range of theoretical perspectives including (but not limited to) social learning theory, decision theories, locus of control, and attribution theory. In addition, this theory for instructional design acknowledges environmental and humanistic views, as well as cognitive dissonance and learned helplessness. The acronym ARCS stands for Attention, Relevance, Confidence, and Satisfaction; all-important aspects of motivation. The on-line environment presents particular challenges for instructors when considering issues of motivation. To begin, students tend to perform better in on-line classes if they have developed

a degree of self-motivation and self-regulation. It is much too easy to put off course requirements for an on-line course. Students quickly learn, however, that is also quite difficult to get caught up. During the orientation sessions and especially the first two weeks of a web course, an instructor must remain very sensitive to indications that a student is struggling with issues of self-discipline. Early involvement and interesting activities help significantly. Having a choice in the activities and projects also increases motivation and helps the student become invested in their own learning.

The On-Line Experience

To begin, the first semester, Dr. Bonk (course designer) and Burger (associate instructor) co-presented the student orientation for in-resident students. Dr. Bonk led the general orientation and then each section of the course adjourned to separate computer labs for the individual section orientation sessions. General orientation addressed the field practicum component of the course, while section orientation in the computer labs provided the opportunity for students to become acquainted with each other and course issues such as: course design, requirements, methods for evaluation, the syllabus, and technological issues. A written version of the orientation was posted on-line for distance education students (and for review for the in-resident students, as needed). Students spent a portion of the orientation sessions navigating the web site to ensure they understood the forum layout and how to post responses or modify them.

The following semester, Burger and Dakwa, the associate instructors, co-presented the course orientation in the same general manner. Support from Dr. Bonk was obtained weekly during a continuation of the course in Teaching and Instruction, in addition to individual consultation. This course provided opportunities for associate instructors to explore theoretical as well as practical issues of teaching and learning, and provided the opportunity to raise particular issues or problems in a supportive and collaborative environment.

A constructivist approach to teaching and learning was evident both in the graduate course for the associate instructors, and in the method used to scaffold the instructors into the profession of teaching Simms and Ponder (1997). Further, the approach is evident in the associate instructors' on-line classrooms, embodied in their instructional approach to facilitate learning of the undergraduate students enrolled in the on-line course. So often, a new task can seem overwhelming. However, knowledgeable use of Vygotsky's Zone of Proximal Development (ZPD) with students at any level in their development greatly lessens any sense of bewilderment. Mentoring and apprenticeship were very effective tools enabling an associate instructor to grow gracefully into the profession. We made it a point to have a one-on-one meeting with each student mid-way through the course to obtain student insight and assist with any difficulties the students might be encountering.

The starting point of having a framework from which to teach undergraduate educational psychology was very helpful. The course evolved from a framework that included an interactive textbook, a syllabus, case studies, activities, and an on-line forum to serve as a point of contact between students and the associate instructors. The forum held the course syllabus, course calendar, reading schedule, discussion groups, and places to post the student work, as well as grading criteria and student grades. There were never any questions about what assignments had been received, when they were due, or how many points the student's had earned for their work, as this information was available via the on-line forum.

The opening screen for the SiteScape Forum was rather simple, offering students choices such as: Discussion, Weekly Work, Journal, Projects, or Café. From there, if students selected Discussion, they would then choose Discussion Week 1, Discussion Week 2, etc. The Café held lists of which students were responsible to facilitate each discussion. During the orientation session, students signed up to co-facilitate two weekly discussions. The Café also held "extra's" such as votes taken on classroom issues, current events pertaining to course material, and so on. Designed in this way, navigation was very straight forward, with the majority of students leaving the orientation sessions with complete confidence in their ability to operate in an on-line environment. The course structure encouraged students to contribute frequently and the tasks and activities were clearly specified. Occasionally students asked questions by email, which was usually heaviest at the beginning of the term. Email communication was also used if students had sensitive material to discuss and did not wish to post particular material on-line for the rest of the class to view.

The classroom environment was easily established and a team spirit was recognizable as we worked together to solve functional difficulties that occurred from time-to-time. Not being a technological genius has advantages! The students rallied and we worked together to solve problems such as those occurred when 25 people, of varying experience or skill level, attempt to work together on-line.

Together, as a class, we adjusted when the publisher's website (containing optional weekly activities) experienced technical difficulties and went off-line. We adjusted due dates as needed to recognize the flexibility so

desirable in on-line courses. We examined the impact of due dates and late work both from a teacher's and a student's perspective. Together we explored issues of assessment and evaluation, and all benefited from sharing each other's views enabled by the open, authentic learning environment. Pre-service teachers gained experience by co-facilitating weekly assignments during the on-line class. They created optional weekly activities for the other students. Case studies, in addition to field experiences, provided authentic scenarios for student reflection. Other student's of Dr. Bonk had written many of these case studies previously. Mistakes made were turned into "teachable moments" and every opportunity to discuss educational psychology in terms of the learning we were accomplishing because of our particular course design greatly added to the content of the textbook, journal articles, and field experiences in elementary or secondary classrooms. Duffy & Cunningham, (1996) assert that "learning becomes a matter of change in relation to the culture(s) to which one is connected – with the gradual transformation of one's means of constructing one's world as a function of the change in membership in that culture". Culture in this sense is broad. The culture in which the learner finds him- or herself will determine the kinds of knowledge creation that will occur. We hope that a culture of collaboration and willingness to explore divergent theories in a safe environment will be incorporated and passed on because of experiences such as these.

Open journals pertaining to the student's field experiences illuminated both fears and hopeful expectations regarding first experiences, as novice teachers, in the classroom. Students shared their views in the open journals, and emailed one another. An interesting activity that was used as an icebreaker during orientation, involved students writing one of their fears when entering their classroom for the first time. Responses included "being boring," "not knowing the material," and "the kids won't like me." At the end of the course, when we met to view student presentations, the cards were brought back out and discussed. Most students agreed that they enjoyed hearing about the other students' fears, and were greatly relieved when most of their fears did not actualize. While distance education students did not attend the orientation, or closing meetings, transcripts of the events were posted for their review.

Finally, one insight gained from this experience, is that it is most important to "catch" students before they fail. Sometimes the technological demands are too confusing for beginning students. I lost one student the first semester, as I didn't realize the extent of her difficulties until she was hopelessly behind. To remediate this, I instituted a "mid-term check-up" in which I met individually with each student. We discussed their general progress, problems and insights, plans for their class project, etc, and this became a strategy I will use whether teaching on-line or in a traditional classroom.

Using the American Psychological Association's Learner Centered Principles and a socio-cultural constructivist approach to on-line teaching provides the opportunity for students, at any level, to recognize "the legitimacy and limits of the vast array of approaches" (McCaslin & Hickey, 2001) to teaching and learning educational psychology. Further, a structured framework such as that provided by Bonk and Cummings (1998) provides excellent scaffolding to support an associate instructor's emerging skills when teaching undergraduates in an on-line environment. As the undergraduates integrate knowledge of the content of educational psychology, in the context of an on-line environment, the elementary and secondary students they teach will receive the benefits of an expanded approach to traditional teaching. In this constructivist environment, cognitive flexibility is enhanced.

References

Alexander, P. A. and Murphy, P. K. (1994) The research base for APA's learner-centered psychological principles, paper presented at the American Educational Research Association annual meeting, New Orleans, LA.

American psychological Association (1993) Learner-centered Psychological Principles: Guidelines for school Reform and restructuring, Washington, DC, American Psychological Association and the Mid-continent Regional Educational Laboratory.

Bonk, C. J. and Cummings, J. A. (1998) A dozen recommendations for placing the student at the center of web-based learning, Educational Media International, 35, 2, 82-9.

Bonk, C. J. and Dennon, V. (1999) Teaching on the Web: With a little help from my pedagogical friends. Journal of Computing in Higher education 11,1, 3-28.

Bonk, C. J. and Reynolds, T.H. (1997) Learner-centered web instruction for higher-order thinking, teamwork, and apprenticeship. In Khan, B.H. (ed.), Web-Based Instruction, Englewood Cliffs, NJ, Educational Technology Publications, 167-78.

Driscoll, M. P. (1994). Psychology of learning for instruction. Allyn & Bacon: Needham Heights, MA.

Duffy, T. M., and Jonassen, D. H. (1992). Constructivism and the technology of instruction: A Conversation. Erlbaum: NJ.

Duffy, T. M. and Cunningham, D. J. (1996). Constructivism: Implications for the design and delivery of instruction. In D. J. Jonassen (Ed.), Handbook of Research for Educational Communications and Technology (pp. 170-198). New York: McMillan Library Reference USA.

McCaslin, M. and Hickey, D. (2001). Educational psychology, social constructivism, and educational practice: A case of emergent identity. Educational Psychologist, 6(2), 133-140.

Reigeluth, C. M. and Stein, F. S. (1983a). The elaboration theory of instruction. In C. M. Reigeluth (Ed.), Instructional-design theories and models. Hillsdale, NJ: Erlbaum.

Reigeluth, C. M. (1983b). Instructional design: What it is and why is it? In C. M. Reigeluth (Ed.), Instructional-design theories and models. Hillsdale, NJ: Erlbaum.

Simms, R. L. and Ponder, G. (1997) Using schooling and technology to learn to teach in the 21st century, Educational Media International, 34, 2, 94-6.

Snowman, J. and Biehler, R. (2000). Psychology Applied to Teaching (9th ed.) New York: Houghton Mifflin Co.

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

Reproduction Basis

[X] This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

[ ] This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").